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**Director, Foreign Broadcast
Information Service**

FBIS-0270/85


17 June 1985

**Associate Deputy Director
for Science and
Technology
Room 6E45, Headquarters**

Jim:

**Attached is the report on
the Swaziland asbestos. We are
pursuing answers to the questions
raised in para. 5.**

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12 JUN 1985

MEMORANDUM FOR: Director, Foreign Broadcast Information Service

FROM:

Chief, Safety Division,
Office of Medical Services

SUBJECT: Asbestos Tiles at Swaziland Bureau and
Residences, FBIS

REFERENCE: Note by DD/FBIS Swaziland, dated 9 April 1985,
regarding asbestos in FBIS Bureau and staff
houses, Swaziland

1. The Occupational Health Branch, Safety Division, has evaluated the health risk posed by asbestos tiles in the Swaziland FBIS Bureau and private residences. As outlined in the reference, asbestos tiles are sometimes used as a substitute for wood building materials in Swaziland. Asbestos is a fibrous mineral which is commonly mined in South Africa.

2. Two representative tiles from the Swaziland Bureau were forwarded to the Safety Division and analyzed by an accredited environmental laboratory. They were found to contain approximately 15-25% asbestos. The mere presence of asbestos does not, however, necessarily mean the tiles pose a significant health risk. The asbestos fibers which are bound in the tiles must first become airborne and must then be inhaled in sufficient quantities before the potential hazard stage is realized. Therefore, a valid hazard assessment can only be made when the levels of airborne asbestos fibers in the affected environment have also been defined.

3. To estimate the degree of potential asbestos fiber release via natural deterioration of the tiles, a test was conducted by placing the Swaziland Bureau tiles in a constant air stream. Less than 0.1 asbestos fibers per cubic centimeter of air (less than 0.1 fibers/cc) were generated and detected in the immediate vicinity of the tiles at the test air velocity of 400 feet per minute. However, these results would have been significantly higher had the tiles been disturbed, i.e. cut, punctured, or sanded during the test.

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4. The Occupational Safety and Health Administration (OSHA) standard for airborne asbestos is 2.0 fibers/cc. This is the average airborne asbestos level to which OSHA believes nearly all workers may be repeatedly exposed without adverse effect. It is permissible to have a substrate (e.g. tile) containing 100% asbestos, provided the level of airborne asbestos generated by this substrate is less than 2.0 fibers/cc. Other occupational health authorities have recommended a more stringent asbestos standard of 0.1 fibers/cc, and the Safety Division believes this to be a more appropriate exposure level.

5. Based upon the information available and the results of the asbestos tile testing, the Safety Division does not believe an asbestos health hazard exists at present at the Swaziland Bureau. However, the following information should be provided for further evaluation:

a. A report on the location and condition of the asbestos tiles in the Swaziland Bureau, and an estimate of the total exposed surface area of the tiles.

b. The number of Bureau residences in Swaziland which contain asbestos tiles, the location and condition of the tiles, and an estimate of the total exposed surface area.

c. A report on the possibility that sprayed-on asbestos insulation may be present in either the FBIS Bureau offices or private residences. Sprayed-on asbestos insulation is usually applied to the ceiling, air ducts, water pipes or structural support beams. Do not collect a sample of the suspect material, just indicate its location.

6. Based upon the requested information from paragraphs a, b, and c above, the Safety Division will make a determination as to whether a survey of the Swaziland FBIS Bureau is considered necessary. Until such time as the above data is provided, the following information should be forwarded to the Swaziland Bureau along with a summary of this report:

a. Do not sand, cut, paint, puncture or disturb the asbestos tiles as this may generate airborne asbestos fibers.

b. Do not add any asbestos tiles to existing structures, or lease additional buildings which contain asbestos tiles (or other forms of suspect asbestos).

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7. As eluded to in the reference, the problem of asbestos in drinking water from asbestos piping is also addressed. It is only because of recent advances in microscopic techniques that asbestos fibers have been detected in drinking water in some parts of the United States, although it has been present there for many years. The best available epidemiological evidence suggests that asbestos fibers do not pose a significant health risk via ingestion of contaminated drinking water. However, the problem is still under study.

8. Should additional information be necessary, please contact the Safety Division on extension or secure line

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cc: C/DDO/AF/SS

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